

**REPUBLIC OF MOLDOVA**

**REORGANIZATION  
OF  
MOLDTRANSELECTRO**

**Regulatory Development  
and  
Power Market Operations**

*Final Report*

*Prepared for:*

U.S Agency for International Development  
Office of Economic Restructuring  
USAID/Ukraine

*Prepared by:*

Hagler Bailly  
1530 Wilson Boulevard  
Suite 400  
Arlington, VA 22209-2406  
(703) 351-0300

March 1999

# Contents

<b>Introduction .....</b>	<b>3</b>
<b>The Need for Reorganization .....</b>	<b>3</b>
<b>The Existing Organization.....</b>	<b>5</b>
<b>Developing Expertise within Moldtranselectro .....</b>	<b>6</b>
<b>Proposed Organization Structure .....</b>	<b>6</b>
<b>Transfer Pricing.....</b>	<b>8</b>
<b>Training.....</b>	<b>8</b>
<b>Public Relations .....</b>	<b>9</b>

CHART A: DIVISIONS AND CORPORATE FUNCTIONS.....	10
CHART B: SYSTEM SERVICES .....	11
CHART C: TRANSMISSION SERVICES .....	12
CHART D: FINANCIAL SERVICES.....	13
CHART E: ADMINISTRATIVE SERVICES.....	14

ANNEX 1: EXISTING ORGANIZATION CHART	
--------------------------------------	--

## 1. INTRODUCTION

The Moldovan power sector went through a major restructuring in late 1997. The distribution companies and generating companies were separated from the former state monopoly Moldenergo and new joint stock companies were created. The remaining state owned entity was renamed *Moldtranselectro* which was left with various existing enterprises and functions, not all necessarily associated with the provision of electric and thermal energy.

The new power sector entities such as Moldtranselectro need to be organized to efficiently and effectively provide the services required to operate in the new power market. The organizations will need different capabilities in this new business environment, including employees with economic, legal and marketing skills, modern equipment, and new business processes.

ANRE has issued two licenses to Moldtranselectro, one for operating and maintaining transmission facilities and the other for central dispatch services. These continuing essential services are consistent with the power sector reform framework, and any other residual functions or entities will be discontinued or spun-off in due course.

The organizational focus and structure of Moldtranselectro needs to be revised to be consistent with the new licensed activities and, correspondingly, the talents and expertise of its employees remaining need re-evaluation, and perhaps retraining programs introduced, in order to meet the future needs of the transformed organization.

Under the Government's Energy policy (Resolution NR 542 and NR 260), it is envisioned that the generation and distribution systems of Moldova will be privatized during 1999. Moldtranselectro will remain a State company performing both transmission and central dispatch services for the foreseeable future.

As discussed further below, the restructuring process has not yet resolved satisfactorily the critical issue of asset ownership as between transmission and distribution facilities. This ownership issue is a fundamental, key priority which must be resolved prior to privatization to define the assets to be sold to investors and to establish boundaries for the ongoing functional responsibilities between Moldtranselectro and the newly privatized distribution utilities.

This document discusses the major issues confronting Moldtranselectro as it commences operations in a market-oriented, commercial environment, and defines a new, flexible organizational structure designed to be responsive to Moldtranselectro's new mandates.

## 2. THE NEED FOR REORGANIZATION

Moldtranselectro, as both the dispatch and transmission license holder, has been given the responsibility for management and operation of the national transmission grid. Under its licenses, its specific responsibilities are defined as follows:

Transmission license

*Activities necessary for, and directly related to, the operation of High Voltage Transmission Grid facilities used for the transmission of electric energy from suppliers to consumers as well as from suppliers to suppliers.*

Dispatch license

*Activities necessary for, and related to, the performance of power system dispatching and coordination functions.*

In both the dispatch license and transmission license, the license holders are **prohibited from engaging in any activities** other than those stipulated in the License Conditions and Rules and Regulations adopted by the ANRE.

In addition the Moldovan Electricity Act of December 1998 states that:

- (1) The technological and operating activity of the power system shall be coordinated and managed by Central Dispatch.*
- (2) Central Dispatch will register contracts of power supply in accordance with the Regulations approved by the Agency.*
- (3) Central Dispatch cannot be a supplier.*

And it further states that:

- (4) Every licensee or consumer has the right of access to the transmission grid without discrimination.*
- (5) The electricity transmission entity is obliged to transport electric energy to the place of destination in accordance with the conditions stipulated in the contract concluded between parties, the license's conditions and regulations issued by the Agency.*
- (6) The electricity transmission entity shall answer any claim relevant to its activity during the period of 15 days reckoned from the moment when the claim was registered.*
- (7) The License for electric energy transmission is valid unless the Agency withdraws it due to breach of License's conditions. The license can be canceled by the Agency after 25 years of the presentation of a written notice.*
- (8) The license holder for the transmission of electric energy will operate the transmission grid in accordance with the regulations of central dispatch, conditions stipulated in the license and effective technical rules.*
- (9) The transmission entity cannot be a supplier.*

While in some ways, the activities now required are similar to functions undertaken within the structure of Moldenergo in the past, in some very significant ways the execution of its licensed responsibilities within the restructured power sector, operating in a modern commercial business environment, will require an entirely different approach and skill set.

### **3. THE EXISTING ORGANIZATION**

Annex 1 provides the existing organizational chart of Moldtranselectro. At the present time the existing organization includes more than 1,300 employees.

While there have been many changes since restructuring, it is appropriate and necessary to review carefully the number and qualifications of personnel required to fulfill the functional reorganization of Moldtranselectro which is recommended here.

One of the continuing, surprisingly controversial, issues for Moldtranselectro and the Government, as owner of all of the existing power sector entities, is that related to the division of asset ownership between facilities operating at 35 kV and those at 110 kV and above.

The rationale for changing the assignment of electric transmission facilities operating at 35 kV from the accounts of Moldtranselectro and assigning them to the accounts of the five local distribution companies is compelling:

- In order to implement operations of the central dispatch, power market and settlements center, which are essential to the reform framework, it is necessary to collect hourly meter data from approximately 200 interconnection points if the transmission grid boundary is at 110 kV. If the interconnection points with distributors remain at the 35 kV level, then the number of such meter points increases to about 5,000, which is both impractical to implement and economically infeasible.
- To the best of our knowledge there is no other transmission grid anywhere in a market environment which operates 35 kV facilities; and
- The ability to attract potential investors in the distribution companies will be severely impaired unless they are permitted and expected to own and operate 35 kV facilities, which is normal world practice.

Further, by performing these adjustments in asset ownership, the activities of the transmission company will be focused on what is truly the “high voltage transmission grid” as specified in their license.

The existing transmission division includes many individuals whose work location is at the distribution companies. Since the initial (and existing) separation of facilities during the restructuring of Moldenergo assigned all 35 kV facilities to Moldtranselectro, today these individuals work on both distribution facilities (i.e., facilities operating at less than 110 kV) and those at 110 kV and above.

Once the correct allocation of transmission/distribution assets is accomplished, many of these individuals probably should be transferred to the local distribution company. Moldtranselectro has at least two options to inspect and maintain 110 kV and above facilities:

- Enter service contracts with the local distribution companies to use their (transferred) personnel to work on Moldtranselectro high voltage lines; or
- Establishing a centralized work team for transmission line maintenance.

These or other options should be studied in more detail, but issues relating to the use of personnel for transmission maintenance present no obstacle to proper allocation of 35 kV assets to the distribution companies.

#### **4. DEVELOPING EXPERTISE WITHIN MOLDTRANSELECTRO**

The current dispatch and transmission personnel have many years of technical experience in operating the power system. However, since non-payment of salaries in the electric sector in recent years has discouraged new hiring, there are very few younger professionals available to replace the more mature staff which now dominate the personnel ranks.

In previous times many talented individuals providing technical support to the power sector were from the specialized electric power institutes created by the former Soviet Republics. For Moldova, many came from those institutions located in Ukraine, since the Moldovan power sector was a part of the control area of the Ukraine power grid. Today these institutions do not have the financial strength to continue and will probably not be able to provide the technical expertise which will be needed in the future.

With the introduction of market economics and commercial discipline to the Moldovan power sector, the future top management of Moldtranselectro should be capable not only of technical competence, but also should possess strong abilities in business economics and finance. Moldova has good technical universities, but the country is short on management schools to teach the expertise for operating in market-based economies.

This lack of available talent cannot be permitted to interfere with the ability of Moldtranselectro to quickly adapt to the needs of a power market based on contracts, economic efficiency, and fiscal responsibility. Specialized training programs, the engagement of outside experts, internships for promising managers or professionals in other countries and other innovative measures will be required to assure that Moldtranselectro obtains the necessary expertise for successful fulfillment of its responsibilities.

#### **5. PROPOSED ORGANIZATION STRUCTURE**

The services to be provided by Moldtranselectro include:

- The reliable and secure operation of the electric power sector in accordance with Market Rules;
- Daily and long-term forecasting of power sector requirements;
- Assisting market participants to acquire required power resources;
- Operating and maintaining a reliable transmission network;
- Planning, designing, engineering, operating, and maintaining new transmission facilities as required by power market participants;
- Metering of all connections and international interconnections; and

- Determining energy settlements for the power market.

Consistent with these functions and its electric licenses, the new proposed organization for Moldtranselectro is divided into four divisions that provide the following services:

- Two major primary functions aligned with the licenses:
  - System Services, and
  - Transmission Services.
- Two other supporting divisions:
  - Financial Services, and
  - Administrative Services.

This recommended structure reflects a goal to keep the new organization focussed on its primary responsibilities under its licenses, to avoid any unnecessary complexity within the organization both to control costs and promote effective management, to recognize the central role of finance and accounting within any business and to provide common financial and administrative supporting functions in the most cost-effective manner.

The recommended organization is presented through a series of attached charts designated *Chart A through Chart E*, which illustrate the specific functions and activities assigned to the four divisions identified above.

*System Services* will include all the dispatch services, scheduling of power resources, and reporting of the daily activities on the power market. Short and long-term planning, communications and information resources were placed in the dispatch services because these activities are closely related to the security and reliability of the power system for which the dispatch licensee is responsible. The Settlements Center will operate under System Services, since most of the information for settlements will be provided by the Dispatch Center, so there will need to be close coordination between these functions.

All activities regarding the provision of a reliable transmission network will be included in *Transmission Services*. This would include engineering and design, operations and maintenance, construction of new facilities and upgrading the existing network. The Transmission Services Division will also be responsible for meter reading because the personnel available to provide that service are in the transmission operations department and can best provide this service.

The *Financial Services* and *Administrative Services* Divisions will provide support for both primary functional divisions (System Services and Transmission Services) with common costs allocated to the primary divisions based on factors subject to the approval of ANRE. The support services include: Information Services, Controller (Accounting), Rates and Regulatory affairs, Treasurer and Financial Analysis, Legal Counsel, Public Relations and Corporate Communication, Human Resources, Procurement and Support Services.

A management audit is needed to determine the extent of the expertise in the existing organization, the expertise needed in the future, and a plan to meet those needs. The quantification of new expertise that will either need to be learned or acquired by engaging new

employees will require a significant undertaking. The time it will take to acquire new expertise and implement the necessary changes likely will be measured in years rather than months.

As an example, some of that effort to increase business expertise is underway in the form of instituting International Accounting Standards as now required under Moldovan law. The changeover to full international accounting is scheduled for completion in two years and this is a very ambitious target, since this effort has been hampered by the lack of IAS expertise in Moldova. Similarly, transforming Moldtranselectro to embrace a commercial business environment is a significant challenge.

## **6. TRANSFER PRICING**

Certain departments within Moldtranselectro will, by design, perform services for other divisions. The costs related to the services provided will be charged to the division requiring the services through a mechanism called *transfer pricing*. The intent of transfer pricing is to operate more efficiently by using expert personnel throughout the organization and then allocating the associated costs to the appropriate function for accounting, ratemaking and other purposes.

The best examples are both the Financial Services and Administrative Services functions where all direct costs incurred within each division must be allocated to either the Services Division or the Transmission Division as may be appropriate. However, in similar fashion any division may have occasion to perform services for some other division.

For example, we propose that the telecommunications function be placed within the Engineering Department of the Transmission Division, where the majority of electronic and electrical engineering activities will occur in Moldtranselectro. This telecommunications function with the Engineering Department will provide support to the Dispatch Division on the occasional need. Therefore, for each such specific work project, telecommunications personnel will charge their time to the Dispatch Division along with any costs for material, and an appropriate associated overhead for the personnel involved.

## **7. TRAINING**

The existing organization has multiple training departments. These departments provide technical training in such areas as substation operations maintenance. These various training programs are crucial to the reliability of the electric system and are required for the professional certification of the crew personnel. This training must continue.

Additional training will be required of all professional and management personnel. The creation of new economic and contractual relations between power market participants and support organizations and the disciplines associated with commercial business operations need to be understood and learned to supplement the existing high level of technical expertise. In addition, there are many management development programs that will be needed to enrich the scope and understanding of management skills in preparation for future leadership. These training programs should include:



- Setting goals and objectives
- Developing and implementing strategic plans
- Economic and financial analysis and planning
- Employee selection and growth
- Management accounting
- Revenue requirements and tariffs
- Win/win negotiations
- Providing incentives for success

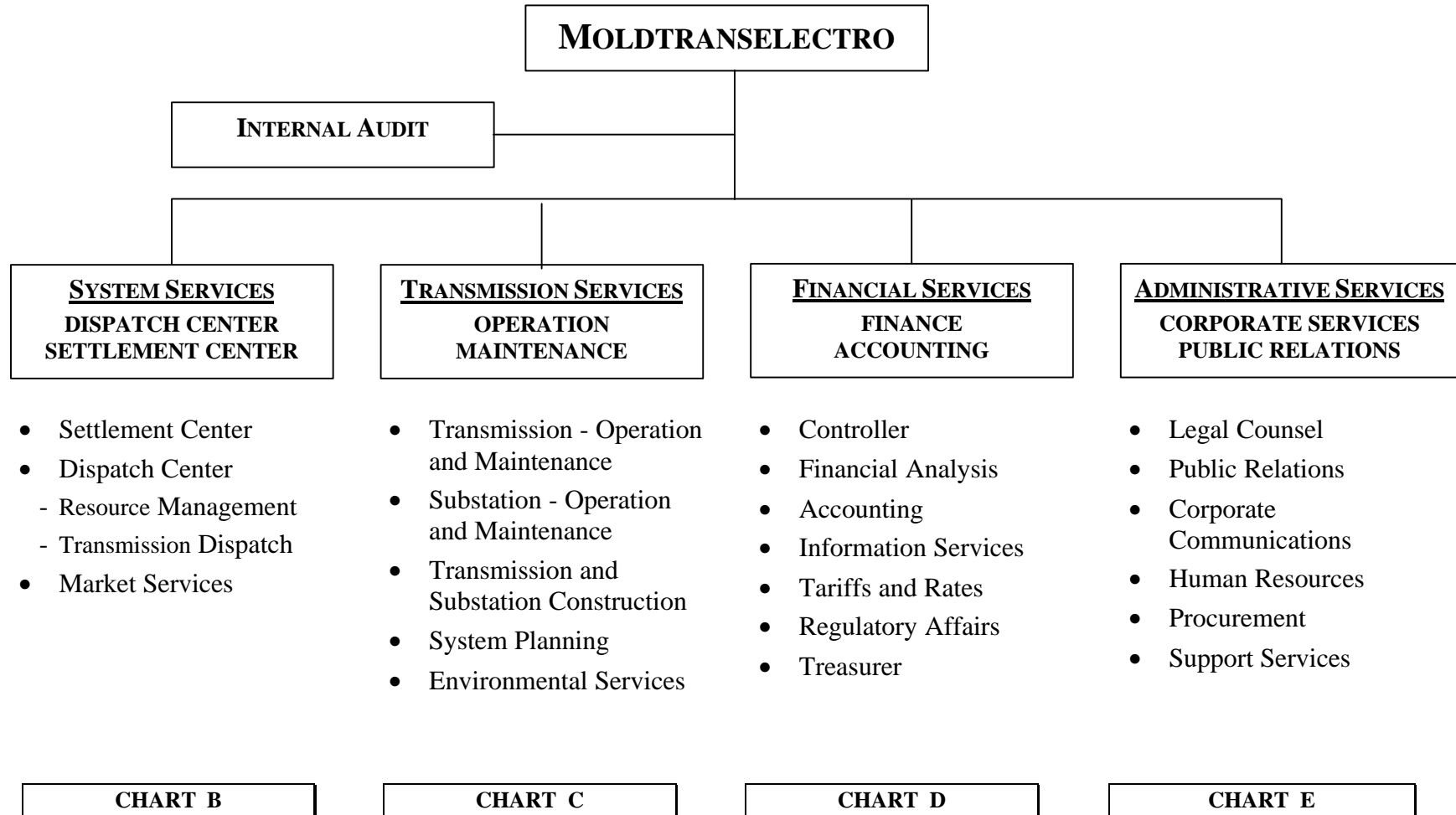
## **8. PUBLIC RELATIONS**

Public relations personnel for Moldtranselectro will be part of the Administrative Services Division located in the Public Relations Department. The existing organization has such a department, but the current personnel will require further extensive training in dealing with customers, media, government, and the company's employees.

Hagler Bailly has prepared a contemporaneous paper on the functions and organization of the Public Relations Department within Moldtranselectro.

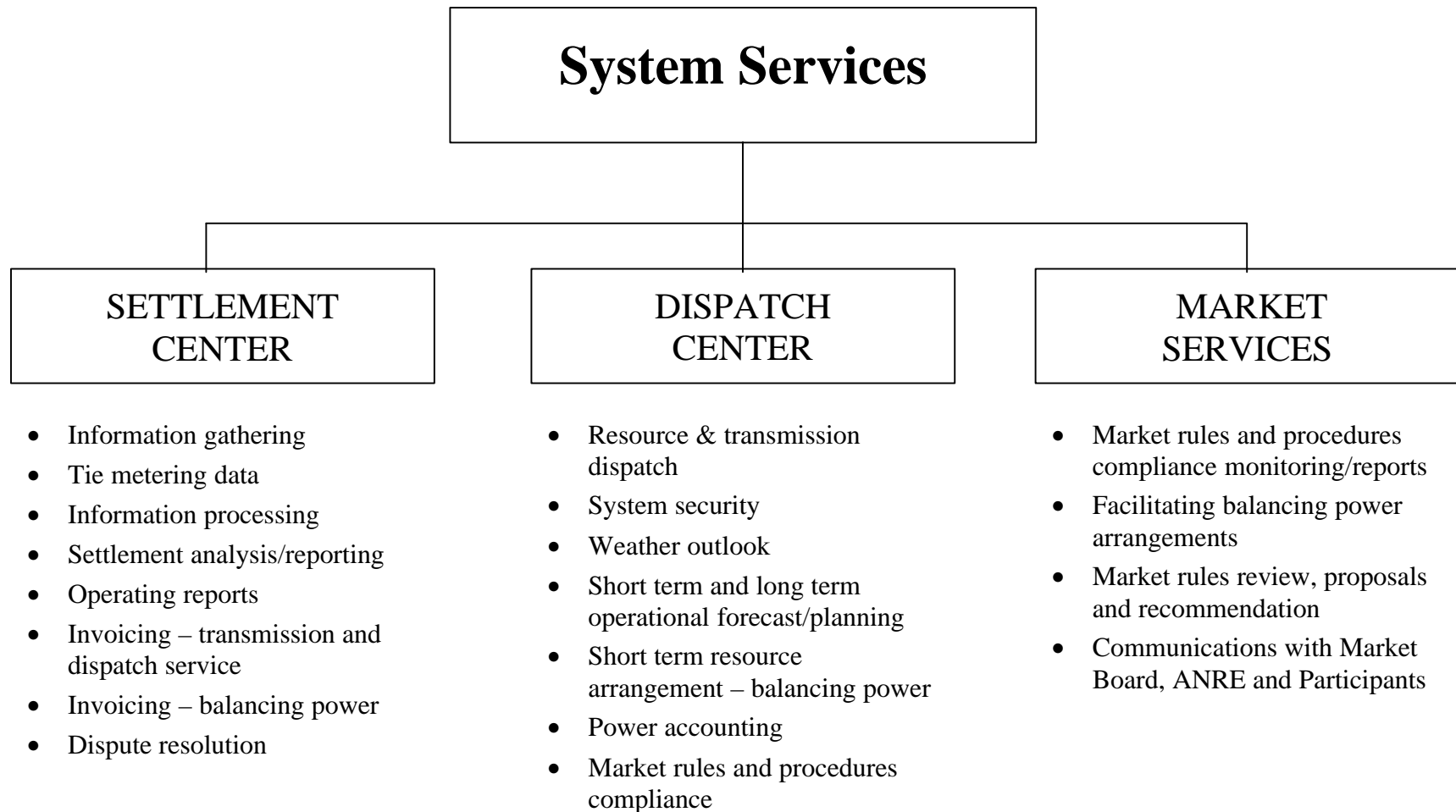
## MOLDTRANSELECTRO CORPORATE ORGANIZATION

### CHART A DIVISIONS AND CORPORATE FUNCTIONS



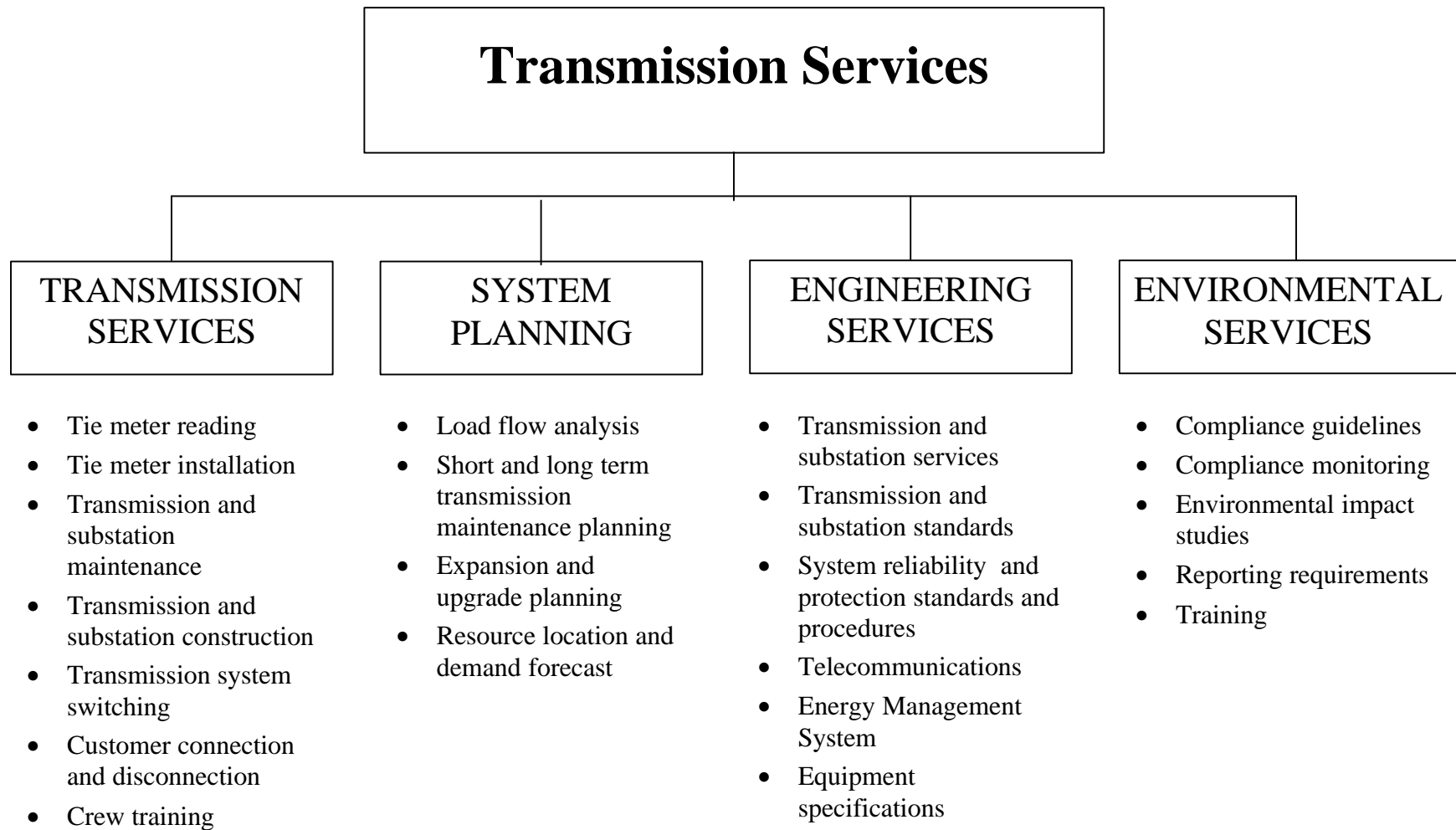
## MOLDTRANSELECTRO CORPORATE ORGANIZATION

### CHART B



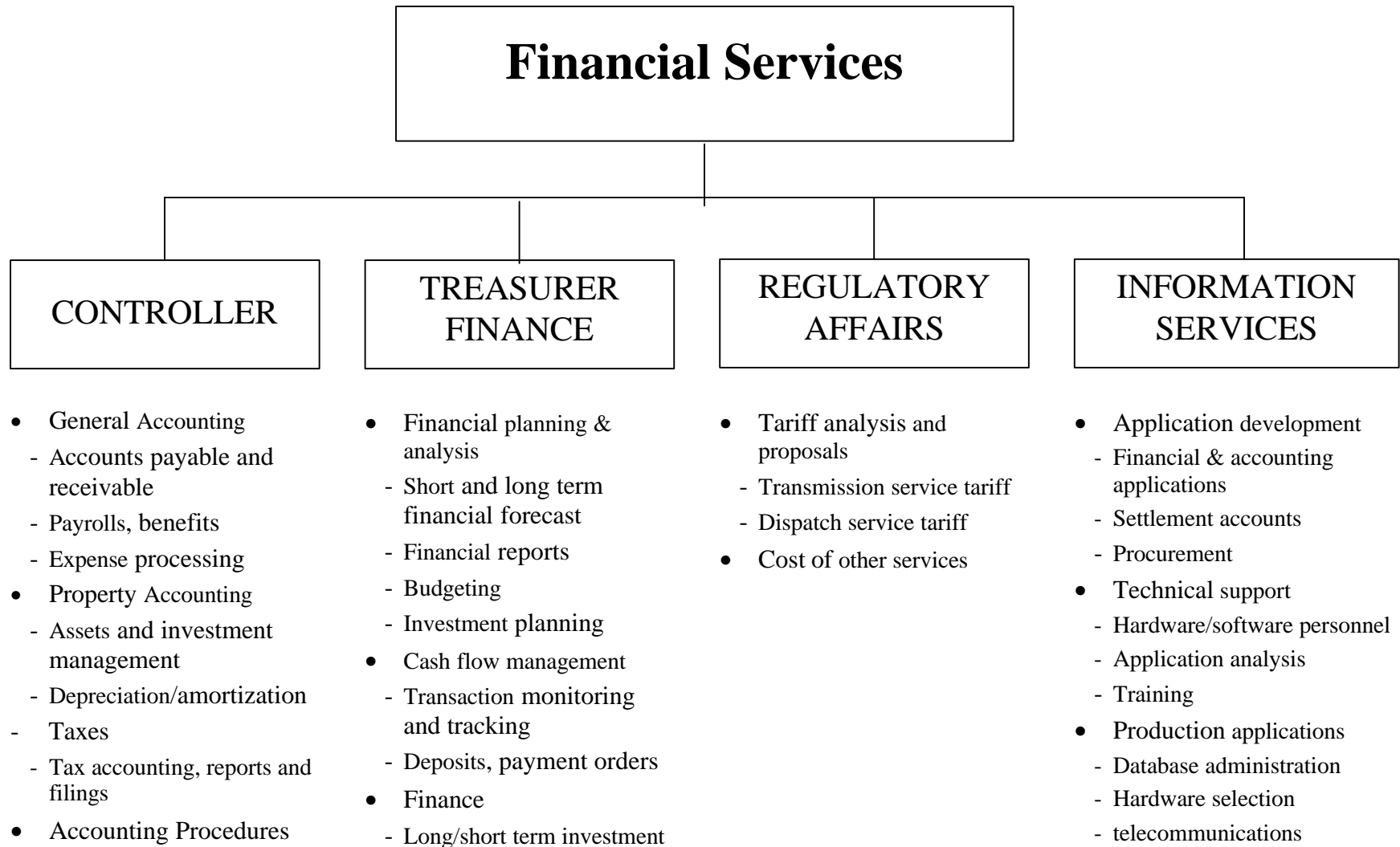
## MOLDTRANSELECTRO CORPORATE ORGANIZATION

### CHART C



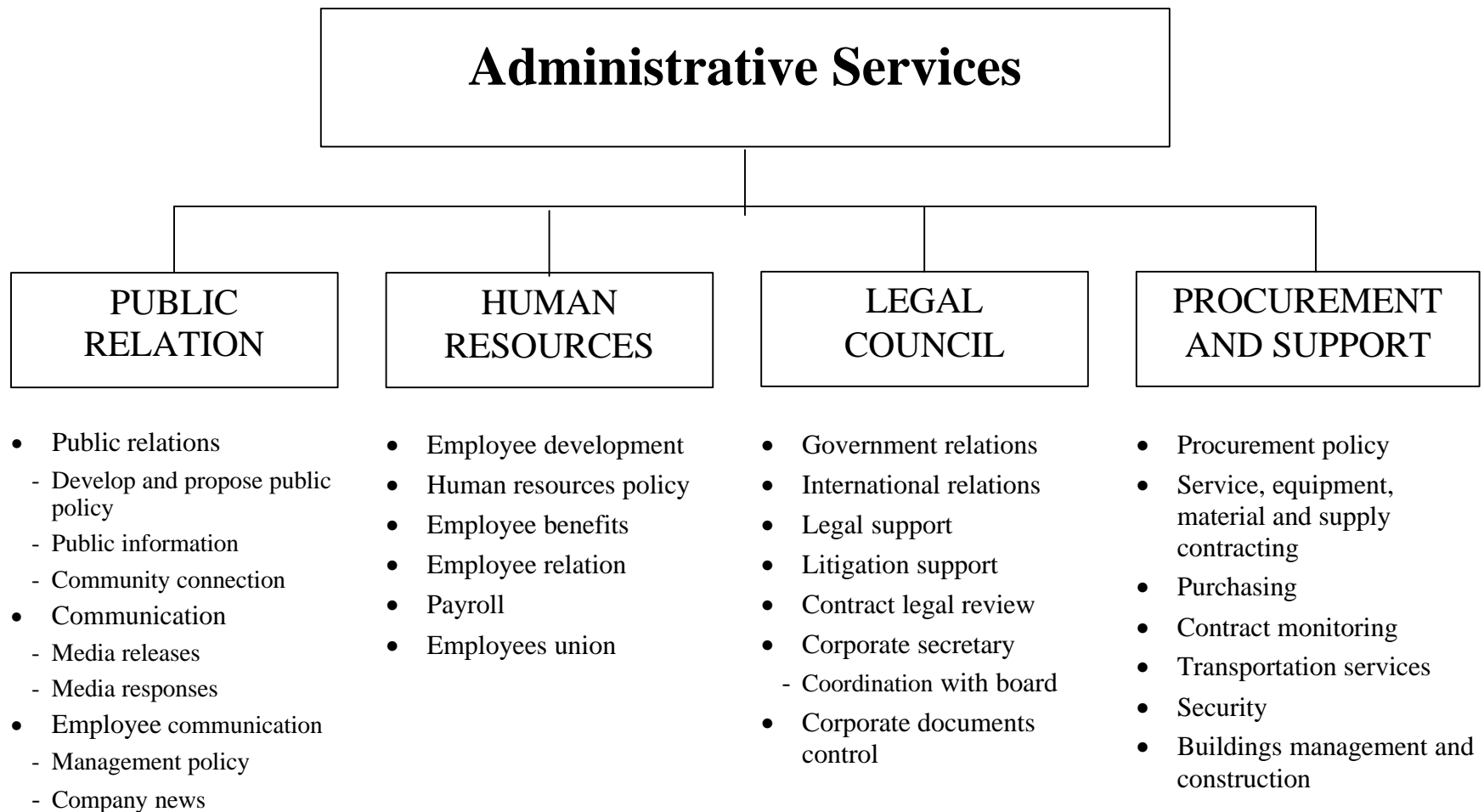
## MOLDTRANSELECTRO CORPORATE ORGANIZATION

### CHART D



## MOLDTRANSELECTRO CORPORATE ORGANIZATION

### CHART E



### Moldtranselectro Current Organizational Structure

